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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,987	07/11/2003	Andreas vom Schloss	PNL 21342	2783

7590 02/10/2005
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EXAMINER

NGUYEN, TUYEN T

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/616,987

Applicant(s)

SCHLOSS ET AL.

Examiner

TUYEN T. NGUYEN

Art Unit

2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/11/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

In the specification, page 6, line 20, "compound 10" should be corrected as –compound 9--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 5-7, and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Oosuka et al. [US 6,114,935].

Oosuka et al. discloses an ignition coil [figure 4] comprising:

- a central core [21];
- a winding structure includes primary and secondary windings [14, 15] wound about the central core;
- an out core [22];
- cavity arranged around the primary and secondary windings [figure 4];

Art Unit: 2832

- at least one elastic insulating member [42, 43] disposed between the winding structure and the outer core; and
- resin sealing [20] disposed between the winding structure and the outer core.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oosuka et al..

Oosuka et al. discloses the instant claimed invention except for method use to apply the elastic insulating element.

The specific method steps use to apply the elastic insulating element would have been an obvious design consideration for the purpose attaching the elastic insulating element to the winding structure.

Claims 8, 10, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oosuka et al. [US 6,114,935] in view of Oosuka et al [US 6,525,636].

Oosuka et al. '935 discloses the instant claimed invention except for the multi-layer outer core and sealing compound filled the cavity.

Art Unit: 2832

Oosuka et al. '636 discloses an ignition coil [figure 10] comprising a multi-layered outer core [25] and resin compound [26] filled in cavity around winding structure [figure 11].

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use a multi-layered outer core for Oosuka et al. '935, as suggested by Oosuka et al. '636, for the purpose of controlling the magnetic flux.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to filled resin in the cavity around the winding structure and outer core of Oosuka et al. '934, as suggested by Oosuka et al. '636, for the purpose of preventing the winding structure from cracking.

Regarding claims 10 and 18, Oosuka et al. discloses the instant claimed invention except for the outer core comprise more than one layer.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use a plurality of outer core in Oosuka et al. for the purpose of controlling the magnetic flux.

Claims 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oosuka in view of Hamer et al. [US 2003/0058077 A1].

Oosuka et al. discloses the instant claimed invention except for an insulating sheet or a shrunk-on tube.

Hamer et al. discloses an ignition coil [10] comprising a winding structure [figure 1] having a heat shrinkable tube [36] arranged on the outer surface of the winding structure.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to include a heat shrinkable tube on the outer surface of the winding

Art Unit: 2832

structure of Oosuka et al., as suggested by Hamer et al., for the purpose of preventing moisture and protecting the winding structure.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUYEN T. NGUYEN whose telephone number is 571-272-1996. The examiner can normally be reached on M-F 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ELVIN ENAD can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTN *TTN*

Tuyen T. Nguyen